## REMARKS

### *Preliminary matters*

Applicants wish to thank the Examiner for the courtesy extended during the personal interview that the Examiner held with Applicants' representative on January 29, 2008.

In addition, Applicants respectfully request that the Examiner consider the references submitted in the Information Disclosure Statement of September 18, 2007.

### *Status of the claims*

Claims 33 and 35-45 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Uchida et al. (U.S. Patent No. 6,057,051) (hereinafter "Uchida") in view of Johnson (U.S. Patent No. 6,808,833).

### *Response to claim rejection*

Applicants respectfully submit that the presently claimed invention is not anticipated by or rendered obvious by Uchida in view of Johnson, for least the following reasons.

I. The structure of Uchida indicates that the combined teachings of Uchida and Johnson would not anticipate or render obvious the presently claimed invention

Uchida discloses a fuel cell device packaged in a cell device casing **203** (Fig. 16) which has intake ports **16** and accommodates a fuel cell body **204** and hydrogen storage unit **205**. Accordingly, the fuel cell body **204** is integrated with the hydrogen storage unit **205** within the cell device casing **203**. This means that the fuel cell body **204** cannot be mechanically and individually separated from hydrogen storage unit **205**. Otherwise, the fuel cell device could not

be miniaturized or micro-miniaturized as mentioned in the "Summary of Invention" section of Uchida.

On the other hand, the fuel cell according to the present invention has a fuel supply portion and a power generating section, both of which are mechanically separable from each other, as illustrated in Figs. 2-4 of the present specification. Both the fuel supply portion and the power generating section of the fuel cell are not packaged with in any casing. This separate structure of the fuel cell makes it possible to individually arrange the fuel supply portion and the power generating section in the vicinity of different, remote, portions of an electric device, such as a heat dissipating section in the heat producing section of the electric device.

Accordingly, Applicants respectfully submit that the presently claimed invention is not rendered obvious by the combined teachings of Uchida and Johnson.

II. Uchida and Johnson constitute nonanalogous art

First, as noted on page 9 of the Amendment of January 30, 2007, Applicants respectfully submit that Uchida and Johnson constitute nonanalogous art because Uchida discloses fuel cells that utilize hydrogen (which is not liquid at room temperature, as recited in the present claims) and Johnson discloses fuel storage units for fuel cells utilizing fuel that is liquid at room temperature (i.e., the fuel storage unit in Johnson stores fuel that is liquid at room temperature). The position set forth in the Office Action at page 10 is that Uchida and Johnson do constitute analogous art because both are directed toward fuel cells. However, Applicants respectfully assert that Uchida and Johnson constitute nonanalogous art because of the types of fuel utilized by the fuel cells with which the references are concerned. Uchida is directed toward the art concerning fuel cells utilizing hydrogen fuel, which is not liquid at room temperature. Johnson,

on the other hand, is directed toward the art concerning fuel cells utilizing fuel that is liquid at room temperature. See, e.g., page 9 of the Amendment of January 30, 2007.

Accordingly, Applicants respectfully submit that Uchida and Johnson constitute nonanalogous art.

III. The combined teachings of Uchida and Johnson do not teach the presently claimed invention

The present claims recite an electric device comprising at least a heat-producing section which produces heat during operation; a heat-dissipating section which is arranged adjacent to the heat-producing section for removing heat produced in the heat-producing section; and a fuel cell which serves as an electric power source and uses a fuel being liquid at room temperature. The fuel cell comprises a fuel-supply section and a power-generating section wherein at least part of the fuel-supply section is arranged in the heat-dissipating section. The fuel-supply section comprises a fuel tank and a fuel channel and at least part of the fuel channel is arranged in the heat-dissipating section.

Applicants respectfully submit that neither Uchida nor Johnson disclose or teach cooling a heat producing section using the fuel itself.

Uchida does not disclose that the hydrogen fuel therein cools the head producing section of the fuel cell. Uchida teaches that the hydrogen storage unit 205 (the fuel supply section) is heated by the air discharged from the fuel cell body and water retention means 8 for recovering and retaining water formed in the fuel cell body 4 (see column 6, lines 3-4 of Uchida). In addition, the hydrogen supply pipes 6b are embedded in the water retention means 8. The moisture or water in the water retention means 8 penetrates into the hydrogen supply pipes 6b

through peripheral walls thereof, thereby humidifying the hydrogen gas flowing through the interior of these pipes 6b (see column 6, lines 44-49 of Uchida). The water retention means 8 is held in contact with the fuel cell body 4, and therefore absorbs heat produced when fuel cell body 4 generates electricity, thus contributing to evaporation of the retained moisture (column 6, lines 49 to 52). Thus, in Uchida the water retention means 8 retains water formed in the fuel cell body 4 and the water penetrates into the hydrogen supply pipes 6b.

Accordingly, Applicants note that the water may serve to cool the fuel cell body 4. However, the hydrogen fuel itself is not used to cool or dissipate the heat generated by any other heat producing section of the fuel cell.

In addition, as discussed on pages 9-10 of the Amendment of January 30, 2007, the combined teachings of Uchida and Johnson would not lead one of ordinary skill in the art to arrive at Applicants' claimed invention because (1) Johnson, which discloses a fuel cell fuel storage unit for storing fuel that is liquid at room temperature, provides no teaching or motivation for altering the fuel cell taught within Uchida such that the fuel cell would run on fuel that is liquid at room temperature, rather than on hydrogen; and (2) one of ordinary skill in the art would use a fuel storage unit with Uchida that stores hydrogen, since that is the fuel that Uchida uses - not a fuel storage unit such as the one disclosed in Johnson that stores fuel that is incompatible with the disclosed fuel cell.

In response, the position set forth in the Office Action merely asserts that such a combination would be "obvious" in light of Johnson's apparently irrelevant disclosure that the use of liquid fuels in fuel cells is safe. Applicants respectfully submit that the response set forth in the Office Action did not fully address Applicants' arguments, and Applicant respectfully requests the Examiner's position with respect to the above arguments.

Accordingly, Applicants respectfully submit that the combined teachings of Uchida and Johnson do not teach the presently claimed invention.

IV. There is insufficient motivation to alter the fuel cell in Uchida to use fuel that is liquid at room temperature, nor motivation to combine Uchida with Johnson

As discussed on pages 10-12 of the Amendment of January 30, 2007, there is insufficient motivation to alter the fuel cell in Uchida to use fuel that is liquid at room temperature, and therefore there is no motivation to alter the teachings of Uchida such that the fuel storage unit disclosed within Johnson could even be considered for use with the fuel cell in Uchida. In addition, Applicants again respectfully submit that in the presence of the specific teaching of hydrogen fuel and in the absence of any indication that the fuel cell structure taught within Uchida is compatible with a fuel that is liquid at room temperature, that there is insufficient motivation to alter the fuel cell in Uchida to use the fuel required by the present claims.

Further, Applicants again respectfully submit that there has not been provided any motivation regarding why one of ordinary skill in the art would attach to a fuel cell a fuel storage unit meant to store fuel that is not the same type of fuel used by the fuel cell.

The response to Applicants' argument in this respect was that that Johnson discloses that liquid fuels are "relatively safe and easy to use and to store at room temperature." Applicant respectfully submits that this is not sufficient motivation to alter the fuel cell in Uchida, and even if it were, that such a vague teaching would not indicate to one of ordinary skill in the art that there was a reasonable probability of success for using a fuel that is liquid at room temperature in a fuel cell that is explicitly disclosed as using hydrogen fuel. Nor would such a teaching indicate to one of ordinary skill in the art how such an alteration could be made.

Therefore, Applicants respectfully submit that there is insufficient motivation to alter the fuel cell in Uchida to use fuel that is liquid at room temperature.

***Conclusion***

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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